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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
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ART UNIT	**PAPER NUMBER**
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/713,649	SHAPIRO, MICHAEL W.	
	Examiner	Art Unit	
	Andrew Y. Chou	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on _____ is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date 3/15/2004
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1, 10, and 17 are independent claims.

2. Claims 1-23 are pending

3. The priority date recognized is 11/14/2003.

Information Disclosure Statement

4. Information Disclosure Statement filed on 03/15/2004 has been acknowledged and recognized by Examiner.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

6. Claims 10-16 are rejected under 35 U.S.C 101 because claim limitations are directed towards software per se. The claimed invention is directed to non-statutory subject matter. Apparatus claims fail to recite any hardware features required enabling the functionality. Thus, claims 7-12 are rejected under 35 U.S.C 101 as being computer listings per se. See also MPEP 2106.01(I).

Oath/Declaration

7. The Office acknowledges receipt of a properly signed oath/declaration filed on 11/14/2003.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-23 are rejected under 35 U.S.C 102(b) as being anticipated by Chaiken et al. US 6,481,008 B2 (hereinafter Chaiken).

Claim 1:

Chaiken discloses a method of translating data, comprising:

obtaining a value of an implementation data structure from an instrumented program (see for example column 7, lines 46-59);

accessing a translator associated with the instrumented program, wherein the translator comprises a plurality of transformations (see for example FIG. 2A, item 210, "input translation", and related text); and

translating the value of the implementation data structure using the translator to obtain translated data, wherein the translating comprises applying the plurality of transformations to convert a representation of the implementation data structure into an interface data structure (see for example FIG. 2A, items 210, 220, 240, and related text).

Claim 2:

Chaiken further discloses the method of claim 1, further comprising:

executing a tracing program to enable a probe in the instrumented program; triggering the probe in the instrumented program (see for example column 7, lines 46-59, "tracing"); and

transferring translated data from the translator to an execution framework, wherein the execution framework comprises a tracing framework (see for example column 7, lines 30-46).

Claim 3:

Chaiken further discloses the method of claim 1, further comprising:

executing a debugging program in the instrumented program in response to an instrumentation request (see for example column 8, lines 15-29); and

transferring translated data to an execution framework in response to the instrumention request, wherein the execution framework comprises a debugger (see for example column 8, lines 29-37).

Claim 4:

Chaiken further discloses the method of claim 1, wherein the translator is defined using a high-level programming language (see for example column 1, lines 35-49).

Claim 5:

Chaiken further discloses the method of claim 1, wherein the translator is updated independently of the execution framework (see for example column 13, lines 10-24).

Claim 6:

Chaiken further discloses the method of claim 1, further comprising:

delivering the translator using an encoded delivery (see for example FIG. 2A, item 210, and related text).

Claim 7:

Chaiken further discloses the method of claim 1, further comprising:

delivering the translator using a compiled delivery (see for example FIG. 2A, item 210, and related text).

Claim 8:

Chaiken further discloses the method of claim 1, further comprising:

selecting the translator using an instrumentation request (see for example FIG. 2A, item 210, and related text).

Claim 9:

Chaiken further discloses the method of claim 1, further comprising:

selecting the translator using knowledge of a function argument type of the instrumented program (see for example FIG. 2A, item 210, and related text).

Claim 10:

Chaiken discloses a system (see for example FIG. 1, and related text) for translating data, comprising:

an instrumented program comprising at least one implementation data structure (see for example (see for example FIG. 3, item 301, "program", and related text);

a translator comprising a plurality of transformations (see for example FIG. 2A, item 210, and related text;

a compiler arranged to accept the translator and transform a value of the at least one implementation data structure into translated data (see for example column 12, lines 60-68); and

an execution framework configured to receive the translated data (see for example FIG. 2A, item 203, "EXE", and related text).

Claim 11:

Chaiken further discloses the system of claim 10, wherein an instrumentation request explicitly translates the value of the at least one implementation data structure into the translated data (see for example FIG. 2A, items 210, 220, 240, and related text).

Claim 12:

Chaiken further discloses the system of claim 10, wherein a function call implicitly triggers the translating the value of the at least one implementation data structure into the translated data (see for example FIG. 2A, items 210, 220, 240, and related text).

Claim 13:

Chaiken further discloses the system of claim 10, wherein the translator is defined using a high-level programming language (see for example column 1, lines 35-49).

Claim 14:

Chaiken further discloses the system of claim 10, wherein the translator is updated independently of the execution framework (see for example column 13, lines 10-24).

Claim 15:

Chaiken further discloses the system of claim 10, wherein the translator is delivered using at least one selected from the group consisting of encoded delivery and compiled delivery (see for example FIG. 2A, item 210, and related text).

Claim 16:

Chaiken further discloses the system of claim 10, wherein the execution framework comprises at least one selected from the group consisting of a tracing framework and a debugger (see for example FIG. 2A, item 203, "EXE", and related text).

Claim 17:

Chaiken discloses a computer system for translating data, comprising:

a processor (see for example FIG. 1, item 21, and related text);

a memory (see for example FIG. 1, item 22, and related text);

a storage device (see for example FIG. 1, item 32, and related text); and

software instructions stored in the memory for enabling the computer system to:

obtain a value of an implementation data structure from an instrumented program (see for example column 7, lines 46-59);

access a translator associated with the instrumented program, wherein the translator comprises a plurality of transformations (see for example FIG. 2A, item 210, "input translation", and related text); and

translate the value of the implementation data structure using the translator to obtain translated data, wherein the translating comprises applying the plurality of transformations to convert a representation of the implementation data structure into an

interface data structure structure (see for example FIG. 2A, items 210, 220, 240, and related text).

Claim 18:

Chaiken further discloses the computer system of claim 17, wherein the translator is defined using a high- level programming language (see for example column 1, lines 35-49).

Claim 19:

Chaiken further discloses the computer system of claim 17, wherein the translator is updated independently of the execution framework (see for example column 13, lines 10-24).

Claim 20:

Chaiken further discloses the computer system of claim 17, further comprising software instructions to deliver the translator using an encoded delivery (see for example FIG. 2A, item 210, "input translation", and related text).

Claim 21:

Chaiken further discloses the computer system of claim 17, further comprising software instructions to deliver the translator using a compiled delivery (see for example column 12, lines 60-68).

Claim 22:

Chaiken further discloses the computer system of claim 17, further comprising software instructions to select the translator using the instrumentation request (see for example FIG. 4A, and related text)

Claim 23:

Chaiken further discloses the computer system of claim 17, further comprising software instructions to select the translator using knowledge of a function argument type of the instrumented program (see for example FIG. 4A, and related text).

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Y. Chou whose telephone number is (571) 272-6829. The examiner can normally be reached on Monday-Friday, 8:00 am – 4:30 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam, can be reached on (571) 272-3695.

The fax phone number for the organization where this application or proceeding is assigned is (571) 273 8300.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed tot eh TC 2100 Group receptionist whose telephone number is (571) 272 2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

AYC

TUAN DAM
SUPERVISORY PATENT EXAMINER